EXHIBIT 9

DECLARATION OF LISA E. HOEBELHEINRICH

I, Lisa E. Hoebelheinrich, declare as follows:

1. I am the Senior Associate Vice President for Research at Carnegie Mellon University ("CMU" or "University") in Pittsburgh, PA. I have held that position since May 1, 2024.

2. I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by university personnel, and could testify thereto.

3. Carnegie Mellon University receives substantial annual funding from the National Science Foundation ("NSF"). CMU has 690 active research awards from NSF totaling $332.6 million in total funding, made up of $296.3 million in grants and $36.3 million in Cooperative Agreements. Total research expenditures for the fiscal year ending June 30, 2024 were $80.3 million, which included $18.2 million in indirect cost reimbursement.

4. CMU intends to apply for new funding awards, and/or renewals and continuations of existing funding awards, in the next year and in years to come.

5. The funding CMU receives from NSF supports critical and cutting-edge research vital to our nation's security, economic competitiveness, agriculture and health. Millions of Americans benefit from and depend on this research. For example:

   a. With NSF support, CMU researchers are developing formal methods that certify via mathematical proofs the correctness of software and resulting systems. Failing software can have catastrophic consequences and the correctness of programs is paramount as more of our daily lives are governed by computing systems. Examples of correctness conditions include deadlock and memory leak freedom,

protection of sensitive and confidential data, timeliness guarantees of IoT and real-time protocols, and protocol compliance in heterogeneous systems.

b. CMU researchers are developing algorithms for causal inference, representation learning, and robust machine learning systems, which enable the identification of underlying causal relationships in complex, high-dimensional data. These technologies are critical for national security applications such as threat detection and attribution in cyber-physical systems, and benefit the public by improving the reliability and fairness of AI used in healthcare, finance, and infrastructure monitoring.

c. CMU researchers have been developing novel nucleic acid nanotechnologies using peptide nucleic acid (PNA). As a nanomaterial, PNA is less susceptible to enzymatic degradation and low-salt denaturation than DNA; its usage can therefore enhance the performance of nanomaterials and nanosensors outside of tightly controlled lab environments. Through the enhancement of nanomaterial durability and responsiveness in harsh environments, this work directly supports American leadership in nanotechnology.

d. CMU researchers working in the area of distributed data storage systems are creating novel new designs for cost-effective and reliable huge-scale data center infrastructure that benefits from next-generation storage device technologies. Advances like this are critical to enabling leadership-class Artificial Intelligence/Machine Learning and cloud computing systems.

e. CMU leads a multi-university grant to prepare service workers to work with AI and automation in their jobs. This work will center worker voices in the development

of AI systems that maximize revenue and benefit the workforce. One line of research on AI innovation provides methods and tools for evaluating AI product concepts for technical, business, and customer desirability, and for mitigation of responsible AI issues. Another line of research seeks to provide AI enhanced-support for elders with Mild Cognitive Impairment and their caregivers.

f. The NSF AI Institute for Societal Decision Making (AI-SDM) led by CMU pioneers transformative AI-driven solutions that directly address critical societal challenges in public health and disaster response by significantly enhancing the speed, accuracy, and efficiency of both human and autonomous decision-making processes. This research is paramount for national security and resilience, enabling government agencies and nonprofits such as state disaster management agencies, the American Red Cross, and public health departments to make rapid, data-driven, and resource-efficient decisions. This ultimately minimizes the devastating human and economic costs associated with nationwide emergencies and public health crises and bolsters national well-being and preparedness.

g. The NSF funded Pittsburgh Supercomputing Center (PSC) is a joint research center between CMU and the University of Pittsburgh. Since 1986, PSC has enabled scientific discovery for tens of thousands of researchers at the national, state, and local levels. For more than 39 years, PSC has acquired and operated 20 supercomputers, including ten systems that were unique or the first of their kind. PSC has consistently upgraded hardware and software infrastructure to meet the evolving needs of researchers and industry partners across the nation.

h. The NSF-funded HAND (Human AugmentatioN via Dexterity) Engineering Research Center is focused on building robotic hands for the next generation of automated systems used in advanced manufacturing. These robots will be vital to the onshoring of industrial manufacturing within the United States over the next decade. This work also includes the creation of new sensing technologies for wearable computing and electronics. These technologies will enable human-centered operation of robotic systems through teleoperation, thereby ensuring job creation within fields that heavily rely on robotics and automation.

i. CMU researchers are focused on enabling much sought-after magnetic memory devices for energy efficient and ultra-compact data storage; development of multigenerational computing through innovation of scalable energy-efficient spin-logic devices; and innovation to realize transformative high-frequency devices for applications in communications, medical imaging, national security, and more. Understanding of emergent phenomena in novel quantum materials is key to enabling next-generation transformative applications to maintain the United States' superiority in quantum and information technologies.

j. CMU's research in edge computing enables new cyber-physical and cyber-human applications that are vital to national security and technological competitiveness in AI. Real-time AI applications that demand extremely low-latency and must run on SWaP (size, weight and power-optimized) mobile devices are critically dependent on the ability to offload compute-intensive AI algorithms to cloudlet edge infrastructure. The OODA loop (Observe, Orient, Decide, Act) of autonomous ultralight drones, for example, is directly impacted by edge computing.

k. CMU research in agricultural technology has developed new sensing and autonomous navigation methods for crop monitoring, along with advanced robotic manipulation for labor-intensive tasks such as grapevine pruning, pepper harvesting, and tissue sampling for early disease detection. Automating these tasks is vital to the survival of U.S. specialty crop industries amid labor shortages and global competition.

l. CMU currently has 119 graduate students funded through the NSF-funded Graduate Research Fellowship Program (GRFP), which provides critical support and training for the next generation of domestic STEM researchers, entrepreneurs, educators and leaders. This support enables these exceptionally talented individuals to focus their graduate research efforts on key areas of national impact, such as artificial intelligence, advanced manufacturing and cybersecurity.

6. Reimbursement of CMU's indirect costs is essential for supporting this research. NSF's cutting of indirect cost rates to 15% would preclude carrying out the kinds of research projects described in paragraph 5 in the future.

7. Indirect costs include constructing and maintaining state-of-the-art laboratories and other facilities required to meet the current technical requirements of advanced research, security and data storage, operations maintenance and utilities supporting the research labs and facilities, and procurement and maintenance of necessary equipment, such as specialized testing environments, precision instrumentation and laboratory safety systems. Without this critical equipment and infrastructure, we simply cannot conduct the research.

8. For example, with respect to the areas of research described in Paragraph 5:

a. PNA nanotechnology research requires biosafety level 2 (BSL2) facilities that can support their solid phase synthesis, purification and characterization. The materials engineering, microrobot manufacture and biointerfacing of these nanostructures require BSL2 cell culture facilities as well as mechanical testing platforms and small-scale data center spaces (including power/cooling and administration), specialized automated peptide synthesis equipment and atomic force microscopy, and electron microscopy

b. Developing AI-driven solutions for societal challenges in AI-SDM necessitates on-site high-performance computing resources, such as GPU clusters and secure data enclaves, for AI model development and large-scale simulations, alongside specialized software and facilities to study human-AI interaction. These resources are essential for developing and deploying effective decision support tools based on complex data analysis.

c. The NSF funded research focused on probing novel quantum materials to enable next-generation transformative device applications, relies heavily on state-of-the-art facilities at CMU for material synthesis, nanofabrication, and quantum device characterization at cryogenic environments.

d. Research in edge computing is critically dependent on low-latency and high bandwidth 5G wireless infrastructure as well as GPU-rich cloudlet infrastructure. CMU operates a private CBRS wireless network to support this research, so that experiments can be conducted free of the interference present in commercial wireless networks. The cloudlet infrastructure requires placement that is proximate to the devices that use edge computing. Such placement requires provision of

physical machine room space that has been conditioned for high end computing infrastructure.

e. Robotics research requires significant hardware and software infrastructure. Designing, building, and maintaining robots requires access to fabrication tools and workshops. Robots also need sufficient space for storage and to provide a safe working environment, both indoors and outdoors depending on the application domain. The robots also need computing infrastructure to support them as embodied AI agents.

9. Polymer science requires a wide range of analytical equipment that includes nuclear magnetic resonance spectroscopy (NMR), infrared spectroscopy, raman spectroscopy, mass spectrometry (MS), liquid chromatography, gas chromatography, microscopy and imaging.

10. Physical facilities costs are one of the largest components of indirect costs. This includes not only the usual costs of constructing and maintaining buildings where research occurs, but the very high costs of outfitting and maintaining specialized laboratory space, which can require special security, advanced HVAC systems, and specialized plumbing, electrical systems and waste management, as well as specialized laboratory equipment. The features and amount of space available to researchers have a direct and obvious impact on the nature and amount of research that can be done at CMU. In addition to the facility needs outlined above, the Richard K Mellon Hall of Sciences, now under construction, is a new facility which will house key departments from the Mellon College of Science (Biological Sciences, Chemistry) and from the School of Computer Science (Language Technologies and Machine Learning, Computational Biology), to build on and expand the interdisciplinary research for which Carnegie Mellon is well

known. Although the University has raised significant private support for this new facility, the budget also depends in part on long term expected indirect cost recovery from sponsored funding.

11. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as NSF. These mandates serve many important functions, including ensuring research integrity; protecting research subjects; properly managing and disposing of chemical and biological agents and other materials used in research; managing specialized procurement and security requirements for sensitive research; managing funds; preventing technologies and other sensitive national security information from being inappropriately accessed by foreign adversaries; providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data; maintaining equipment calibration to meet research quality and security standards; and preventing financial conflicts of interest.

12. Recovery of Carnegie Mellon University indirect costs is based on fixed with carryforward rates that have been contractually negotiated with the federal government.

13. Through fiscal year ending June 30, 2025, the fixed with carryforward indirect cost rates are as follows: On campus capped: 51.8%, On campus uncapped: 51.9%, Off campus capped: 26.0%, National Robotics Engineering Center (NREC) off campus capped: 26.5%, NREC off campus uncapped: 25.4%, and Silicon Valley off campus (predetermined): 26.0%. The Software Engineering Institute ("SEI") is the CMU affiliated Federally Funded Research and Development Center. A separate indirect cost rate is negotiated for the SEI, which is 10.7% in FY25.

14. The effects of a reduction in the indirect cost rate to 15% would be devastating. Of the $80.3 million in expenditures from NSF awards in the fiscal year ending June 30, 2024, approximately $62.2 million consisted of direct costs to CMU (this includes $6.7 million in

subawards to other institutions), and $18.2 million for reimbursement of indirect costs to CMU. In fiscal year 2025, CMU expects to receive a total direct and indirect amount comparable to fiscal year 2024. CMU has not yet negotiated F&A rates with its cognizant agency, ONR, beyond fiscal year 2025, but expects to receive amounts comparable to fiscal year 2024 in indirect cost recovery on an annual basis going forward.

15. If—contrary to what CMU has negotiated with the federal government—the indirect cost rate was reduced to 15% for new awards, that would in time reduce CMU's anticipated total annual indirect cost recovery by approximately $12.8 million to approximately $5.3 million.

16. This reduction would have deeply damaging effects on CMU's ability to conduct research from day one. Many of CMU's current research projects will be forced to slow down or cease abruptly if we cannot apply for renewals at the 51.8% indirect cost cap. This will also necessarily and immediately result in staffing reductions across the board. For example, as indicated above, indirect cost recovery is used to support the salaries of research administrators who play a crucial role in the research ecosystem. They support the administrative and financial aspects of research grants, in addition to supporting compliance with regulations governing such things as human subjects, animal research, biosafety, data privacy, and security. Moreover, recruiting staff who have the requisite knowledge and experience to work on such projects is exceedingly difficult. Even if funding were later restored, it would be difficult to find qualified individuals to fill these positions. Without appropriate funding for indirect costs, the University would have to reduce this staffing, which would immediately and negatively impact CMU's ability to support critical research projects and in turn hamper our ability to contribute to the nation's security, competitiveness and health.

17. CMU has for decades relied on the payment of indirect costs. Until now, we have been able to rely on the well-established process for negotiating indirect cost rates with the government to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. In some cases, CMU has long-term obligations—for example, tenured faculty salaries or admitted PhD students—and it relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments. This multi-year budgeting process also assumes the availability or possibility of grant renewals at roughly similar terms – and certainly at the negotiated indirect cost rate – as had been previously available.

18. In addition to the immediate effects and reliance interests described above, dramatically cutting indirect cost reimbursement would have longer-term effects that are both cumulative and cascading. For example, the loss of highly trained technical staff and the degradation of research infrastructure could make it harder to restart or support high-quality research in the future, even if funding were restored. The lack of administrative and infrastructure support would increase the time spent by scientists on non-scientific tasks. Ultimately, top scientists will not move to (or stay at) the University if we cannot provide the facilities and staff necessary to conduct world-class research.

19. Disruptions to CMU's research will also have negative effects in the Pittsburgh area, the state of Pennsylvania, and the broader region. CMU is one of the largest employers in Pennsylvania. CMU engages in important collaborations with state and local partners to help solve regional challenges through joint research and innovation. CMU's research also drives discoveries

that launch new ventures, attract private investment, and make a positive social impact by supporting the commercialization of novel technologies and catalyzing regional and national economic development. These startups drive economic activity, create high-skilled jobs, and contribute to the growing innovation ecosystem. The reduction in CMU's research budget would immediately and seriously jeopardize these economic contributions.

20. Finally, slowdowns or halts in research by CMU and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both our Nation's national security and its economic dominance.

21. CMU cannot cover the funding gap itself. While CMU maintains an endowment, it is neither feasible nor sustainable for CMU to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery. The majority of CMU's endowment—around 83.8%—is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. CMU is not legally permitted to use those funds to cover research infrastructure costs. Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution.

22. It is also not feasible or sustainable for CMU to use other revenue sources to offset shortfalls in indirect cost recovery. As a non-profit institution, CMU reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other words, unlike for-profit organizations, CMU does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students. Absorbing the cost of a lower indirect cost rate, even if it were

possible, would create long-term budget pressures on CMU—which would in turn force reductions in key investments supporting CMU's faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain CMU's academic excellence. Thus, even if CMU could "cover" some of the indirect costs previously funded by NSF, it could do so only by negatively affecting other critical goals central to the institution's mission.

23. The loss in funding from NSF would mean cost-cutting measures would need to be adopted quickly. CMU cannot "float" all of the indirect costs it would likely lose on future awards. The process of identifying these cuts would need to begin immediately, and layoffs, closures, and research pauses or contractions would follow soon thereafter. Cutting back on CMU's research in fields such as artificial intelligence, edge computing, next-generation storage device technologies, nanotechnology, polymer science, robotics, and advanced manufacturing will have long-term implications on national security and the American economy.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 5, 2005 at 5000 Forbes Avenue, Pittsburgh, Pennsylvania, 15213.

Signed by:
Lisa Hoebelheinrich
974228A58F154EF...

Lisa E. Hoebelheinrich